

REMARKS

Claims 2-10, 55-57 are pending.

Claims 1-10 are rejected.

New Claims 55, 56, and 57 have been added.

Claim 1 has been canceled and its limitations incorporated in amended Claims 5, and 6 which have been written in independent form.

Claims 2, 3, and 4 have been amended to depend from amended Claim 5.

EXAMINER INTERVIEW

The Applicant talked to the Examiner on May 10 to set up an interview. The Applicant discussed the proposed amendments and the Examiner stated that the proposed amendments may put the case in condition for allowance. The Examiner asked the Applicant to fax the proposed amendments and he would call back with his recommendation. The Applicant faxed the proposed amendments on May 10, 2006.

The Applicant talked to the Examiner again on May 15, 2006 to follow up on the faxed proposed amendments and to review his comments on rewriting Claims 5 and 6 into independent form. The Applicant discussed the failure of the prior art to disclose a prism/lens located over each pixel whose orientation with respect to the pixel is modified in response to a control signal. The Examiner stated that he may have to do additional searching since he now better understands the limitations of Claims 5 and 6. The Examiner stated that he felt the case was close to being in allowable form. The Applicant thanks the Examiner for the time spent discussing the case.

I. REJECTION UNDER 35 U.S.C. § 103(a)

To establish a *prima facie* case of obviousness, the rejection must meet three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be some reasonable expectation of success. Finally, the prior art reference must teach or suggest all the claim limitations.

A. Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,329,963 B1 to *Chiabrera et al.* (hereafter "*Chiabrera*") in view of published U.S. Patent No. 2005/0093796A1 to *Ferguson* (hereafter "*Ferguson*").

The limitation of Claim 1 has been added to Claim 5 and 6. Claims 2, 3, and 4 have been amended to depend from amended Claim 5. Therefore, the rejections of Claims 1-4 are moot. New Claims 11, 12, 13 have the same limitations as Claims 2, 3, and 4 and depend from amended Claim 6.

B. Claims 6, 8, and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chiabrera* in view of *Ferguson* and further in view of published U.S. Patent 2003/0112507A1 to *Divelbiss et al.* (hereafter "*Divelbiss*").

Claim 6 has been amended to incorporate the limitations of Claim 1. Claim 6 adds the limitation that the optical element of previous Claim 1 is a prism/lens element oriented over each pixel in the N pixels and coupled to an electrostatic element for modifying an orientation of the prism/lens element relative to a pixel of the display in response to one of the N control signals. The rejection relies upon the assertion that *Chiabrera* teaches the invention of Claim 6. Applicant traverses. *Chiabrera* teaches prism/lenses that are oriented over sub-pixels of a pixel, thus more than one prism/lens is located over a pixel and none of the prism/lens elements are coupled to an electrostatic element. There is no teaching or suggestion in *Chiabrera* that his invention is extendable to using only one prism/lens; the orientation of each prism/lenses of *Chiabrera* is fixed and is not coupled to an electrostatic element for modifying an orientation of the

prism/lens element relative to a pixel of the display in response to one of the N control signals as recited in Claim 6. As a result, the Office Action's *prima facie* case of obviousness fails because it relies upon an incorrect factual predicate. In re Rouffet, 47 U.S.P.Q. 2d 1453, 1455 (Fed. Cir. 1998).

The rejection further states in support of the rejection that *Divelbiss* teaches a micro mirror whose orientation is modified by an electrostatic charge. The micro mirror of *Divelbiss* is the electrostatic device and requires that one of its surfaces is directly opposing a charge generating device which is located at the pixel positions. The micro mirror of *Divelbiss* cannot be a prism/lens as no light comes from the pixel position over which it is located. The light comes externally to the display and the micro mirrors reflect the light. *Divelbiss* does not teach or suggest a prism/lens coupled to an electrostatic device that modifies the orientation of a prism/lens in response to a control signal. *Divelbiss* teaches that a micro mirror that is an electrostatic device moves in response to an electrostatic charge. As a result, the Office Action's *prima facie* case of obviousness fails because it relies upon an incorrect factual predicate. In re Rouffet, 47 U.S.P.Q. 2d 1453, 1455 (Fed. Cir. 1998).

Therefore, the Applicant respectfully asserts that the rejection of Claim 6 under 35 U.S.C. § 103(a) over *Chiabrera* in view of *Ferguson*, further in view of *Divelbiss* is traversed by the above arguments. One skilled in the art would not have looked to combine the prior art references since several limitations are not found within the combination of references, contrary to the assertions in the Office Action.

Claim 8 is dependent from Claim 6 and contains all the limitations of Claim 6. Claim 8 adds the limitation that the electrostatic element of Claim 6 bends a beam coupled to the prism/lens. The Office Action admits that *Chiabrera* modified by *Ferguson* fails to teach the invention of Claim 8. The electrostatic element is coupled to the prism/lens in Claim 6. Claim 6 recites two distinct elements: a prism/lens and an electrostatic element. The Office Action states that *Divelbiss* teaches an electrostatic element that bends a beam coupled to the prism/lens element citing *Divelbiss*, page 1, paragraph 6, lines 6-14 (mirror can act as a prism). Applicant traverses. *Divelbiss* makes no mention of a mirror that acts like a prism in the cited paragraph. *Chiabrera* does

states that prisms may operate as high efficiency mirrors, however the inverse is not true. Further, the micro mirrors of *Chiabrera* and *Divelbiss* rely on twisting a beam and not bending a beam. *Ferguson* teaches prism/lens over each pixel whose orientation is not modified by anything; *Chiabrera* teaches multiple prism/lens over each pixel whose orientations are not modified by anything. Finally, *Divelbiss* teaches a micro mirror that is coupled by beams to a support structure, wherein the orientation of the micro mirror is modified by an electro static charge that "twists the beams" and does not bend a beam. There is no teaching or suggestion that the micro mirror of *Divelbiss* can be replaced with a prism/lens. In fact, the micro mirror of *Divelbiss* is formed by an aluminum coating on one surface of an isolator and facilitates the charge formation used to alter the orientation of the micro mirror in response to the charge device. If the micro mirror of *Divelbiss* was a prism/lens, there is no place to put both the charge device and a light source on the display and there is no expectation that the orientation of the prism/lens could be modified by the charge device. Therefore, the Applicant asserts that *Chiabrera* and *Divelbiss*, singly or in combination, do not teach or suggest the invention of Claim 8.

Therefore, the Applicant respectfully asserts that the rejection of Claim 8 under 35 U.S.C. § 103(a) over *Chiabrera* in view of *Ferguson*, further in view of *Divelbiss* is traversed by the above arguments. One skilled in the art would not have looked to combine the prior art references since several limitations are not found within the combination of references, contrary to the assertions in the Office Action.

Claim 10 is dependent from Claim 6 and contains all the limitations of Claim 6. The Applicant has shown that *Chiabrera*, *Ferguson*, and *Divelbiss*, singly or in combination, do not teach or suggest the invention of Claim 6. Claim 10 adds the limitation that the electrostatic element of claim 6 rotates the prism/lens element around a torsional support beam. Relative to Claim 10, the Examiner states that *Chiabrera* teaches a prism/lens element oriented over each of N pixels. The Applicant has shown that *Chiabrera* teaches multiple prism/lens elements over each of N pixels, none of which are moveable. *Chiabrera* does not teach or suggest that a mirror acts as a prism, rather he states that a prism may operate as a high efficiency mirror. The Office Action

states that *Divelbiss* teaches an electrostatic element that rotates the prism/lens around a torsional support beam. *Divelbiss* teaches a micro mirror that is supported by torsional beams, wherein the micro mirror is configured to hold a charge so that its orientation may be modified by a charge device located beneath the back surface of the micro mirror. A prism/lens cannot be substituted for the micro mirror of *Divelbiss* and still maintain the functionality of either *Divelbiss* or *Chiabrera*; there is no expectation that such a combination will work. *Chiabrera* teaches multiple prism/lens over each pixel that do not move, *Ferguson* teaches a single prism/lens over each pixel that do not move, and *Divelbiss* teaches a micro mirror configured to operate as part of an electrostatic device. The prism/lens elements cannot be substituted for the micro mirror of *Divelbiss*. Therefore, the Applicant asserts that *Chiabrera*, *Divelbiss* and *Ferguson*, singly or in combination, do not teach or suggest the invention of Claim 10.

Therefore, the Applicant respectfully asserts that the rejection of Claim 10 under 35 U.S.C. § 103(a) over *Chiabrera* in view of *Ferguson*, further in view of *Divelbiss* is traversed by the above arguments. One skilled in the art would not have looked to combine the prior art references since several limitations are not found within the combination of references, contrary to the assertions in the Office Action.

C. Claims 5, 7, and 9 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Chiabrera* in view of *Ferguson* and further in view of U.S. Patent 5,490,015 to *Umeyama et al.* hereafter ("*Umeyama*").

Claim 5 has been amended to incorporate the limitations of Claim 1. Claim 5 recites that the optical elements comprise a prism/lens element oriented over each of the N pixels and coupled to a piezoelectric element for modifying an orientation of the prism/lens element in response to one of the N control signals. The Office Action relies upon the assertion that *Chiabrera* teaches a prism/lens element oriented over each of N pixels. The Applicant has shown that *Chiabrera* teaches multiple prism/lens elements over each of N pixels, none of which are moveable. *Chiabrera* does not teach or suggest that a mirror acts as a prism, rather he states that a prism may operate as a high efficiency mirror.

Furthermore, neither *Chiabrera* nor *Ferguson* teach or suggest the use of a piezoelectric element coupled to a piezoelectric element for modifying an orientation of the prism/lens element in response to one of the N control signals. While the Office Action does admit that *Chiabrera* modified by *Ferguson* fails to recite the limitation of Claim 9, it is silent regarding the teachings of *Ferguson* and *Umeyama* relative to Claim 5. Neither *Ferguson* nor *Chiabrera* mention the word piezoelectric. Therefore the Applicant asserts that the teachings of *Chiabrera*, *Divelbiss*, and *Umeyama*, singly or in combination, do not teach or suggest the invention of Claim 5, since several limitations are not taught or suggested by the combination of references. As a result, the Office Action's *prima facie* case of obviousness fails because it relies upon an incorrect factual predicate. In re Rouffet, 47 U.S.P.Q. 2d 1453, 1455 (Fed. Cir. 1998).

Therefore, the Applicant respectfully asserts that the rejection of Claim 5 under 35 U.S.C. § 103(a) over *Chiabrera* in view of *Divelbiss* and further in view of *Umeyama* is traversed by the above arguments. The Applicant asserts that Claim 5 has allowable material. One skilled in the art would not have looked to combine the prior art references since several limitations are not found within the combination of references, contrary to the assertions in the Office Action.

Claim 7 is dependent from Claim 5 and contains all the limitations as Claim 5. Claim 7 adds the limitation that the piezoelectric element operates to bend a beam coupled to the prism/lens element. The rejection relies on the assertion that *Umeyama* teaches a piezoelectric element that operates to bend a beam. Claim 7 is not directed to just any piezoelectric element that operates to bend any beam. Claim 7 is specific and recites that N prism/lens elements that are each located over a pixel of a display and each coupled to a piezoelectric element, wherein the piezoelectric element operates to bend a beam coupled to the prism/lens element. *Umeyama* teaches two piezoelectric elements used to adjust the focus adjusting lens of a focus adjusting mechanism. Not only is the scale of *Umeyama* much larger than elements of the present invention, *Umeyama* does not bend a beam coupled to each prism/lens element over N pixels of a display. The Office Action is silent regarding the teachings of *Ferguson* and *Chiabrera* relative to

Claim 7. As a result, the Office Action's *prima facie* case of obviousness fails because it relies upon an incorrect factual predicate. In re Rouffet, 47 U.S.P.Q. 2d 1453, 1455 (Fed. Cir. 1998).

Therefore, the Applicant respectfully asserts that the rejection of Claim 7 under 35 U.S.C. § 103(a) over *Chiabrera* in view of *Divelbiss* and further in view of *Umeyama* is traversed by the above arguments. One skilled in the art would not have looked to combine the prior art references since several limitations are not found within the combination of references, contrary to the assertions in the Office Action.

Claim 9 is dependent from Claim 5 and contains all the limitations of Claim 5. The Office Action admits that *Chiabrera* modified by *Ferguson* fails to teach the limitation of Claim 9. The Examiner states the *Umeyama* teaches a piezoelectric element that rotates the prism/lens around a torsional support beam and cites FIG. 24, elements 147a, 147b and column 17, line 13 through column 18, line 14 as teaching a piezoelectric element, FIG. 24, elements 142a, 142b and column. 17, line 17, and lines 62-65 as rotating a prism/lens and column 17, lines 33-37 as a torsional support beam. The Applicant asserts that nowhere in this recitation does teach or suggest a piezoelectric element rotating a prism/lens element around a torsional support member. *Umeyama* teaches that an actuator control circuit 149 moves the actuators 147a and 147b back and forth along the optical axis. The mount bases 143a and 143b are rotated on the support shafts 144a and 144b (not torsional) and the prisms 142a and 142b are rotated with the support bases in the directions of double-headed arrows in FIG. 22 such that the convergence angle .theta. is varied. The Applicant asserts that *Umeyama* does not teach a piezoelectric element that rotates a prism/lens element around a torsional (twisting) support beam. As a result, the Office Action's *prima facie* case of obviousness fails because it relies upon an incorrect factual predicate. In re Rouffet, 47 U.S.P.Q. 2d 1453, 1455 (Fed. Cir. 1998).

Therefore, the Applicant respectfully asserts that the rejection of Claim 9 under 35 U.S.C. § 103(a) over *Chiabrera* in view of *Divelbiss* and further in view of *Umeyama* is traversed by the above arguments. The Applicant asserts that Claim 9 has allowable

material. One skilled in the art would not have looked to combine the prior art references since several limitations are not found within the combination of references, contrary to the assertions in the Office Action.

## II. CONCLUSION

The rejections of Claim 6, 8, and 10 under 35 U.S.C. § 103(a) as being unpatentable over *Chiabrera* in view of *Ferguson* and further in view of *Divelbiss* have been traversed.

The rejections of Claims 5, 7, and 9 under 35 U.S.C. § 103(a) as being unpatentable over *Chiabrera* in view of *Ferguson* and further in view of *Umeyama* have been traversed.

Claim 1 has been canceled and the limitations of Claim 1 have been added to amended Claims 5 and 6.

Claims 2, 3, 4 have been amended to depend from amended Claim 5. New Claims 55, 56, and 57 have been added that depend from amended Claim 6.

The Applicants, therefore, respectfully assert that amended Claims 2-10, 55-57 are now in condition for allowance and request an early allowance of these claims.

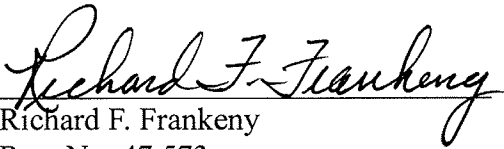
Applicants respectfully request that the Examiner call Applicant's attorney at the below listed number if the Examiner believes that such a discussion would be helpful in resolving any remaining problems.



Respectfully submitted,

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